



Permit to Construct or Modify an Air Contaminant Source Issued Pursuant to Tennessee Air Quality Act

Date Issued: June 6, 2014

Permit Number:

968600P

Date Expires: June 5, 2015

Issued To:

American Towers - Milan TN #308958

Installation Address:

10162 R Stinson Street
Milan

Installation Description:

Emergency Diesel Fired Generator, Rated at 80 kW, Equipped with an Engine Rated at 131 hp

Emission Source Reference No.

27-0244-01
NSPS Subpart IIII
MACT Subpart ZZZZ

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.

CONDITIONS:

1. The application that was utilized in the preparation of this permit is dated April 2, 2014, and is signed by Scot Sandefur, Director EH&S for the permitted facility. If this person terminates employment or is reassigned different duties and is no longer the responsible person to represent and bind the facility in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification shall be in writing and submitted within thirty (30) days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the facility in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

(conditions continued on next page)


TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

NON-TRANSFERABLE

POST AT INSTALLATION ADDRESS

2. The design rated power for the compression ignition engine associated with this source is 96 kilowatts (131 hp). TAPCR 1200-03-09-.01(1)(d) and the application dated April 2, 2014.
3. This emission source is subject to the requirements of 40 CFR part 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ, and 40 CFR §89.112. The applicable requirements of 40 CFR parts 60, 63, and 89 are incorporated into this permit pursuant to Tennessee Air Pollution Control Regulations (TAPCR) 1200-03-09-.03(8).
4. Only diesel fuel that meets the requirements of **Condition 12** shall be used as fuel for this source. TAPCR 1200-03-09-.01(1)(d) and the application dated April 2, 2014.
5. Particulate matter (TSP) emitted from this source shall not exceed 0.3 grams per kilowatt-hour (0.06 lb/hr). 40 CFR §60.4205(b)
6. Sulfur dioxide (SO₂) emitted from this source shall not exceed 0.27 lb/hr. Compliance with this condition shall be assured by compliance with **Conditions 4 and 12**. TAPCR 1200-03-14-.03(5)
7. Carbon monoxide (CO) emitted from this source shall not exceed 5.0 grams per kilowatt-hour (1.06 lb/hr). 40 CFR §60.4205(b)
8. Combined emissions of nonmethane hydrocarbon (NMHC) and nitrogen oxides (NO_x) from this source shall not exceed 4.0 grams per kilowatt-hour (0.85 lb/hr). 40 CFR §60.4205(b)
9. Compliance with the particulate matter, carbon monoxide, nonmethane hydrocarbon, and nitrogen oxides emission limits is based on compliance with **Conditions 2 and 4** of this permit and the manufacturer's certification of compliance with 40 CFR §89.112.
10. Pursuant to 40 CFR §60.4211(f), the permittee must operate the emergency stationary ICE according to the requirements in paragraphs (1) through (3) of this condition. In order for the engine to be considered an emergency stationary ICE under 40 CFR 60, subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (1) through (3) of this condition, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (1) through (3) of this condition, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.
 - (1) There is no time limit on the use of emergency stationary ICE in emergency situations.
 - (2) The permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraphs (2)(i) through (iii) of this condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (3) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph (2).
 - (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Technical Secretary for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
 - (ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
 - (iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

- (3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (2) of this condition. Except as provided in paragraph (3)(i) of this condition, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
- (i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
- (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
 - (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
 - (C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
 - (D) The power is provided only to the facility itself or to support the local transmission and distribution system.
 - (E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

40 CFR §60.4211(f)

11. Visible emissions from this source shall not exhibit greater than twenty percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average). TAPCR 1200-03-05-.01(1) and 1200-03-05-.03(6)
12. Pursuant to 40 CFR §60.4207(b), the permittee shall use diesel fuel that meets the requirements of 40 CFR 80.510(b), as follows:
- (1) Sulfur content shall not exceed 15 parts per million (ppm) maximum for nonroad diesel fuel.
 - (2) Cetane index or aromatic content, as follows:
 - (i) A minimum cetane index of 40; or
 - (ii) A maximum aromatic content of 35 volume percent.

The permittee shall maintain purchase receipts, vendor certifications, material safety data sheets, or other records to demonstrate that all fuel purchased for this source meets the requirements of this condition (any fuel labeled as ultra-low sulfur non-highway diesel fuel or ultra-low sulfur highway diesel fuel meets these requirements). These records shall be made available to the Technical Secretary for inspection upon request. These records must be maintained for a period of at least (2) years from the purchase date.

13. The permittee shall operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the engine manufacturer. In addition, the permittee may only change those settings that are permitted by the manufacturer. 40 CFR §60.4211(a)
14. The permittee shall comply with the PM, CO, and NMHC, and NO_x emission limitations by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b) for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's specifications. 40 CFR §60.4211(c)
15. The source is subject to the requirements of 40 CFR 63 Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). Pursuant to §63.6590(c), a new stationary RICE located at an area source of HAP emissions shall meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR Part 60, Subpart IIII. No further requirements apply for these engines under 40 CFR Part 63. 40 CFR §63.6590(c)
16. The permittee must keep monthly records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for the following categories: (a) emergency operation, as specified in **Condition 10**, Paragraph (1), including what classified the operation as emergency; (b) maintenance checks and readiness testing, demand response, as specified in **Condition 10**, Paragraph (2); and (c) non-emergency operation, as specified in **Condition 10**, Paragraph (3). The permittee shall calculate the operating hours per calendar year. The permittee shall maintain the following log format or an alternative format which readily provides the same required information. All data, including all required calculations, must be entered in the log no later than thirty (30) days from the end of the month for which the data is required. This log shall be retained for a period of not less than two (2) years and shall be made available for inspection by the Technical Secretary or his representative upon request.

MONTHLY/YEARLY LOG: Source 27-0244-01

Year:				
Month	Operating Hours per Month			Comments**
	Maintenance checks & readiness testing	Other non-emergency operation	Emergency operation	
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				
Totals				
** The owner or operator must document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation.				

TAPCR 1200-03-10-.02(2)(a)

17. This source shall comply with all applicable state and federal air pollution regulations. This includes, but is not limited to, federal regulations published under 40 CFR 63 for sources of hazardous air pollutants and 40 CFR 60, New Source Performance Standards. This source shall operate in accordance with the terms of this permit and the information submitted in the approved permit application. TAPCR 1200-03-09-.01(1)(d) and the application dated April 2, 2014, TAPCR 1200-03-09-.03(8)
18. This permit is valid only at this location. TAPCR 1200-03-09-.03(6)
19. The permittee shall apply for a standard operating permit within thirty (30) days of initial start-up of this emission source. TAPCR 1200-03-09-.02(1) and (3)

20. This permit shall serve as a temporary operating permit from initial start-up to the receipt of a standard operating permit (regardless of the expiration date), provided the operating permit is applied for within the time period specified in **Condition 19** of this permit, and provided the conditions of this permit and any applicable emission standards are met. TAPCR 1200-03-09-.02(2)
21. The permittee shall certify the start-up date of the air contaminant source regulated by this permit by submitting
A COPY OF ALL PAGES OF THIS PERMIT,
with the information required in A) and B) of this condition completed, to the Technical Secretary's representatives listed below:
- A) DATE OF START-UP: ____ / ____ / ____
month day year
- B) Anticipated operating rate: ____ percent of maximum rated capacity

For the purpose of complying with this condition, "start-up" of the air contaminant source shall be the date of the setting in operation of the source for the production of product for sale or use as raw materials or energy production.

The undersigned represents that he/she has the full authority to represent and bind the permittee in environmental permitting affairs. The undersigned further represents that the above provided information is true to the best of his/her knowledge and belief.

Signature		Date
Signer's name (type or print)	Title	Phone (with area code)

Note: This certification is not an application for an operating permit. At a minimum, the appropriate application form(s) must be submitted requesting an operating permit. The application must be submitted in accordance with the requirements of this permit.

The completed certification shall be delivered to West Tennessee Permit Program and the Environmental Field Office at the addresses listed below no later than 30 days after the air contaminant source is started-up.

Division of Air Pollution Control
West Tennessee Permit Program
William R. Snodgrass Tennessee Tower
312 Rosa L Parks Avenue, 15th Floor
Nashville, TN 37243

Division of Air Pollution Control
Jackson Environmental Field Office
1625 Hollywood Drive
Jackson, TN 38305

or email a PDF copy to:

Air.Pollution.Control@tn.gov

Or email a PDF copy to:

APC.JackEFO@tn.gov

TAPCR 1200-03-09-.02(3)(b)

(end of conditions)

The permit application gives the location of this source as 35.88862 Latitude and -88.7626 Longitude.

Emission Summary

Permit Number: 968600P

Source Status: New ☒ Modification ☐ Expansion ☐ Relocation ☐

Permit Status: New ☒ Renewal ☐

PSD ☐ NSPS ☒ NESHAPs ☒ Previous Permit Number: Construction n/a Operating n/a

	Pounds/Hour			Tons/Year				Date of Data	*	Applicable Standard
	Actual	Potential	Allowable	Actual	Potential	Allowable	Net Change			
TSP	0.06	0.06	0.06	0.02	0.02	0.02	0.02	4/2/14		1200-03-09-.03(8), §60.4205(b)
SO ₂	0.27	0.27	0.27	0.07	0.07	0.07	0.07	4/2/14		1200-03-14-.03(5)
CO	1.06	1.06	1.06	0.26	0.26	0.26	0.26	4/2/14		1200-03-09-.03(8), §60.4205(b)
NO _x + NMHC	0.85	0.85	0.85	0.21	0.21	0.21	0.21	4/2/14		1200-03-09-.03(8), §60.4205(b)

* - Source of data

PERMITTING PROGRAM: KM DATE: May 15, 2014

American Towers - Milan TN #308958
27-0244-01/968600P

Information From Application
One Diesel Engine (131 hp; 96kW)
Max Operating hours = 500 hr/yr

Potential/Actual Emissions from uncontrolled diesel engine
Source results provided with the application & from AP-42, Table 3.3-1 are as follows:

	Emission Factor (lb/hp-hr)	Horsepower (hp)	Emissions (lb/hr)	Emissions (ton/yr)
SO ₂	0.00205	131.00	0.269	0.067
VOC	0.00247	131.00	0.324	0.081

The following equations were used:
[Emissions (lb/hr)] = [Emission Factor (lb/hp-hr) x Horsepower (hp)]
[Potential Emissions (ton/yr)] = [Emissions (lb/hr) x 500 (hr/yr)] / [2000 (lb/ton)]

Potential/Actual/Allowable Emissions
PM, CO & NOx for 131 hp (96 kW) engine is set by NSPS 40 CFR §60.4205(b)

[PM Potential Emissions (lb/hr)] = [96 (kW)] x [0.3 (g/kW-hr)] x [0.002205 (lb/g)] =	0.064	(lb/hr)
[CO Potential Emissions (lb/hr)] = [96 (kW)] x [5.0 (g/kW-hr)] x [0.002205 (lb/g)] =	1.058	(lb/hr)
[NOx Potential Emissions (lb/hr)] = [96 (kW)] x [4.0 (g/kW-hr)] x [0.002205 (lb/g)] =	0.847	(lb/hr)
[PM Potential Emissions (ton/yr)] = [0.06 (lb/hr)] x [500 (hr/yr)] / [2000 (lb/ton)] =	0.02	(ton/yr)
[CO Potential Emissions (ton/yr)] = [1.06 (lb/hr)] x [500 (hr/yr)] / [2000 (lb/ton)] =	0.26	(ton/yr)
[NOx Potential Emissions (ton/yr)] = [0.85 (lb/hr)] x [500 (hr/yr)] / [2000 (lb/ton)] =	0.21	(ton/yr)

SO2 by 1200-03-14-.03(5)
Allowable = Potential

CONSTRUCTION PERMIT SUMMARY REPORT

Company Name: American Towers – Milan TN #308958

File Number: 27-0244

EPS Initials: KM

Permit Number(s): 968600P

Source Point Number(s): 01

Application Received (date): April 16, 2014

Application Complete (date): April 16, 2014

Air Quality Analysis Performed? Yes ☐ No ☒

Briefly describe the project: (new source, modifications) (what the process is) (type controls proposed) (emissions expected, qualitative) (replacing what sources) (background information)

This emission source consists of a diesel-fired internal combustion engine (131 hp) and associated emergency generator. The source will regularly operate only for maintenance and testing purposes. PM, SO₂, CO, NO_x, and VOC (NMHC) are emitted by this source. This source is subject to the emergency engine requirements of 40 CFR 60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines). This source is also subject to the requirements of 40 CFR 63 Subpart ZZZZ.

The application dated April 2, 2014, states that this emission source is an emergency generator. For fee purposes, allowable emissions are calculated using 500 hours per calendar year.

Rules Analysis

Title V ☐ Cond. Major ☐ Minor ☒

Source category listed in 1200-03-9-.01(4)(b)1.(i)? Yes ☐ No ☒

Reason for PSD:	New source above ____ TPY	<input type="checkbox"/>	Sig. increase in ____ emissions	<input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Applicable NSPS:	40 CFR Part 60, Subpart IIII	<input checked="" type="checkbox"/>	State Rule 1200-03-16-	<input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Applicable NESHAP:	40 CFR Part 61, Subpart ____	<input type="checkbox"/>	State Rule 1200-03-11-	<input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Applicable NESHAP:	40 CFR Part 63, Subpart ZZZZ	<input checked="" type="checkbox"/>	State Rule 1200-03-31-	<input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

Other Applicable State Rules

TSP Emissions:	1200-03-09 -. 03(8)	<input checked="" type="checkbox"/>	N/A <input type="checkbox"/>	NO _x Emissions:	1200-03-09 -. 03(8)	<input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
SO ₂ Emissions:	1200-03-14 -. 03(5)	<input checked="" type="checkbox"/>	N/A <input type="checkbox"/>	Lead Emissions:	1200-03-____ -. ____	<input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CO Emissions:	1200-03-09 -. 03(8)	<input checked="" type="checkbox"/>	N/A <input type="checkbox"/>	____ Emissions:	1200-03-____ -. ____	<input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
VOC Emissions:	1200-03-07 -. 07(2)	<input checked="" type="checkbox"/>	N/A <input type="checkbox"/>	____ Emissions:	1200-03-____ -. ____	<input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

Visible Emissions from Source not to exceed 20 % opacity per Method 9 (Rule 1200-03-05 -. 01(1)) 03(6)